

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of)	
)	
Authorizing Permissive Use of the Next)	GN Docket No. 16-142
Generation” Broadcast Television Standard)	
)	
Amendment of Section 73.626 of the)	
Commission’s Rules to Facilitate the)	
Deployment of Single Frequency Networks)	

To: Office of the Secretary

INITIAL COMMENTS OF ARK MULTICASTING, INC

Introduction

ARK Multicasting, Inc.¹ (“ARK”) files these comments pursuant to the Media Bureau’s Public Notice, DA 19-1036 (rel. October 11, 2019) on the Joint Petition for Rulemaking filed October 3, 2019, by America’s Public Television Stations (APTS) and The National Association of Broadcasters (NAB)(“Petition” or “JPRM”). To the extent the Petition holds true to the promise to “update” and “improve” the Distributed Transmission Rules (“DTS”) ARK supports it. DTS, coupled with the new ATSC 3.0 standard and its unique capabilities to transform television broadcasting has the full potential to create a 21st Century media distribution medium.

¹ Petitioner ARK Multicasting, Inc. (“ARK”) is a strategic partner of Edge Spectrum, Inc. which is one of the largest non-denominational religious broadcasters in the US that has been providing inspiration and uplift for the public for over twenty years. ARK has a Time Brokerage and Operations Agreement with ESI for the development and deployment of a nationwide ATSC 3.0 based NEXTGEN TV network.

As detailed below, the ability to provide high-quality service delivery using Single Frequency Network (“SFN”) technology is a core element in ARK’s network design. Accordingly, ARK is pleased to support the development of updated DTS rules that complement the implementation of ATSC 3.0 based networks. However, certain aspects of the JPRM could retard, not advance, the deployment and capabilities of DTS, ATSC 3.0, and other promising new technologies. The Commission must take care to avoid unintended consequences that could freeze technology and markets, rather than advance them.

Background of ARK

ARK has partnered with Edge Spectrum, Inc., which is one of the largest LPTV licensees with 283 authorizations that cover almost 1/3 of the US population. ARK has a strong presence in second and third tier markets. ARK is actively deploying ATSC 3.0 infrastructure on our existing licenses and construction permits under the FCC authorization that allows LPTV licensees to flash cut to the new ATSC 3.0 standard.² ARK’s network plans incorporate the inclusion of DTS “gap fillers” to ensure a harmonized link budget to all receivers under our licensed contours.

Discussion

The broadcast industry has just concluded almost a decade of regulatory uncertainty, massive displacement of repacked stations, and a just concluded³ interference coordination process as the final requirement of the voluntary incentive auction (“VIA”). While the process has been challenging for all participants in the market, the Commission has generally done a good job modernizing and updating its rules to take full advantage of new technologies and bring tremendous benefits to the public, particularly in the rural markets that ARK will serve. All that

² See 47 CFR § 74.782(c).

³ The frequency coordination for displaced LPTV stations was only completed in July of 2019.

is needed now is time for licensees, manufacturers, and contractors to raise the capital and build the new networks. The Commission should recognize that the industry needs a reasonable measure of regulatory certainty and stability if it is to accomplish those tasks. If the regulatory landscape is too much of a “moving target,” it cannot be funded *or* built. Further changes at this time should be incremental and should advance the interests of the public and of the entire industry, not just some segments at the expense of others.

There are several important issues that should be highlighted for the Commission’s consideration in the proposed rulemaking process. Of critical importance for incorporation in any new rules regarding the evolution of DTS operations are several factors including:

- No DTS deployment by a full-service broadcaster should be allowed to trigger any displacement requirement on existing⁴ LPTV⁵ or translator licensees.
- The deployment of DTS transmission equipment should not in any way trigger additional levels of interference and operational impacts between full-service stations and LPTV licensees.
- In any new DTS regulatory framework, any radio frequency emissions that extend beyond the existing FCC licensed contours must not in any way increase harmful interference to any other licensed TV broadcaster regardless of their class of license, including translators, LPTV, and FPTV⁶ licensees. Specifically, the Commission should ensure that no LPTV licensee will be displaced or have its existing protected contour

⁴ As used herein, “existing” licensees is intended to include holders of still pending applications and construction permits (“CPs”). There are still a number of those and many, if not most, of the pending licenses have been awaiting the conclusion of repacking and displacement applications. Now that the dust has largely finally settled – or is about to – LPTV licensees are finally in a position to secure the necessary capital to construct their systems. But re-introducing regulatory uncertainty regarding the status of the licenses, CPs, and applications that has only recently been largely eliminated risks stalling modernization and the benefits LPTV and new technology promises to rural America.

⁵ Low Power TV.

⁶ Full Power TV.

diminished by the deployment of any DTS transmitter or by any other broadcast licensee regardless of their regulatory status as either a full-service or Class A licensee.

Otherwise the very new technologies and service that the Commission has encouraged and enabled and are currently being planned and built will be needlessly disrupted.

- Permitting FPTV licensees to extend their existing contours at the expense of existing LPTV licensees is not only not the best public policy, it would be contrary to the rights of LPTV as recognized by Congress in the Middle-Class Tax Relief and Job Creation Act Of 2012. *See* 47 USC 1452(b)(5).⁷ While that subsection does not directly address the rule changes in the JPRM, since it related to the VIA , it clearly expressed Congress’ intent to preserve LPTV rights. Those rights were and are secondary to the rights of FPTV licensees only as they existed at that time. A substantial expansion of the FPTV protected contours would cause a diminution of the rights of LPTV in the context of a DTS rule change – a diminution that Congress expressly prohibited in the context of the incentive auction.
- Of equal importance is the harmonization of DTS regulations between LTPV, translator and FPTV licensees. Under the existing DTS rules, LPTV licensees are required to seek a waiver, and site-by-site approval for the installation of DTS “gap filler” transmitters within the protected contour of an LPTV licensee. Given the ATSC 3.0 deployment rights for LPTV licensees, it appropriate for the FCC to harmonize DTS regulations for both FPTV and LPTV licensees by reducing regulatory burden. DTS networks can offer a much-needed services to the public should not be delayed by the enormous burden on

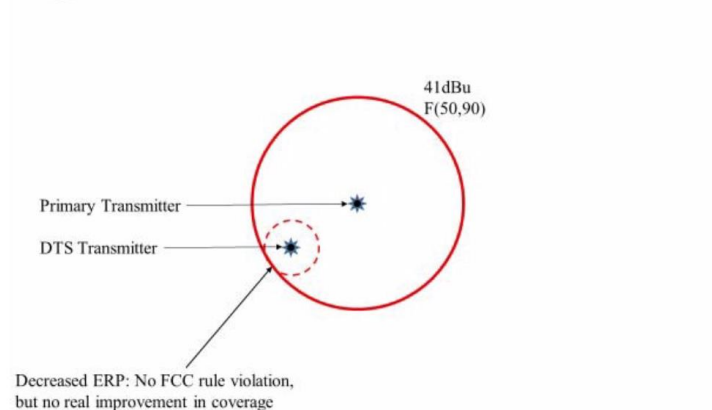
⁷ “Nothing in this subsection shall be construed to alter the spectrum usage rights of low-power television stations.”

LPTV licensees as well as Commission staff, who will need to approve hundreds (perhaps thousands) of DTS gap-filler waivers by LPTV broadcasters.

Regarding the JPRM diagrams incorporated into the Petition ARK makes these observations about the following figures included in the petition:

- ARK takes exception to the statement that the small, low power DTS “gap fillers” are of “little value.” In reality, the use of very low power DTS transmitters will play a very significant role in the addition of utility value and performance for ATSC 3.0 networks. ARK has developed its network designs and network buildout plans that incorporate DTS sites that will operate at powers ranging from as low as 20 Watts EIRP. Depending on the local topography, foliage and buildings ARK will deploy DTS transmitters that are optimized for specific local conditions. Thus, ARK takes exception to the use of the phrase of “little value.” To the contrary, the Commission must understand that there is substantial benefit to the services that can be offered – and consequently to the public – from the incorporation of small coverage DTS sites in ATSC 3.0 networks.⁸

Figure 3. No Rule Violation But Little Value.

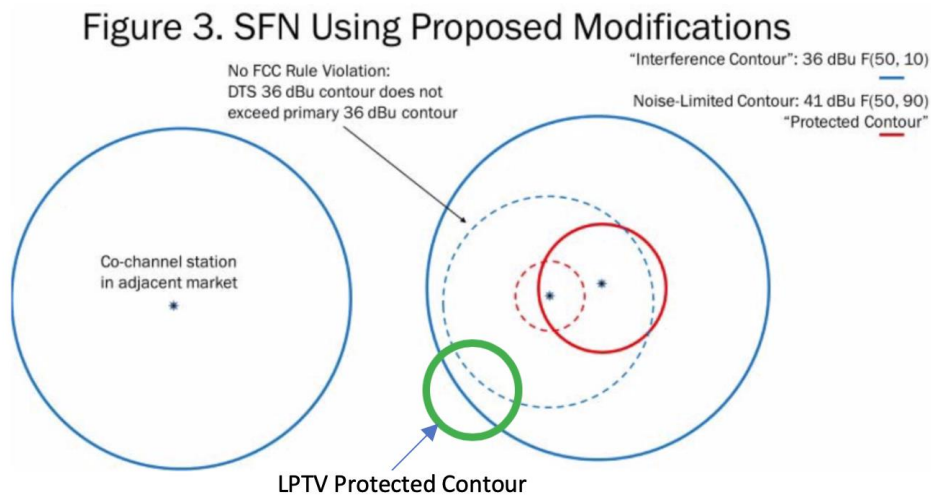


⁸ The attached “Figure 3. No Rule Violation But Little Value” is from the JPRM.

- The Petition appears to contemplate that DTS will be solely or primarily be used to transmit exactly the same content as the primary transmitter. This is 20th Century thinking. If the Commission is not careful and measured in its rule changes it could retard the development and benefits of 21st Century technologies, including DTS and ATSC 3.0. These technologies promise to – and can – deliver much more localized content than traditional “big stick” systems by using multiple lower-powered transmitters to, in effect, cellularize broadcasting. This is something that ARK will do in its markets.
- Another potential problem with the proposal in the JPRM is it would allow DTS sites that are located within the protected contour of an FPTV station to extend their signal beyond their existing licensed (and coordinated) contour out to the 36 dBu “Interference Contour.” ARK has no strong objection to this request, but only if it does not create any displacement or diminishment of any existing licensed LPTV or Translator and any existing Construction Permit that has already been coordinated during the recent VIA repack process.

The illustration that was used in the JPRM only considers the contours of FPTV licensees and their adjacent co-channel licensees. But in the real world it is highly likely that the use of the 36 dBu contour will create harmful interference to various LPTV licensees. ARK has added an example of the issue to the JPRM petitioner’s diagram below, with the green line depicting a potential LPTV station at risk of interference from their proposed liberalization of the DTS interference rules. ARK does not object to the concept, as long as it does not harm existing LPTV or Translator licensees. If Petitioners choose not to take full advantage of the localized content capabilities of DTS and ATSC 3.0, that is currently their right within their existing contours. But they should not further be allowed to stifle innovation currently being planned and

rolled out by adjacent licensees.⁹



Conclusion

ARK looks forward to supporting and participating in the Proposed DTS Rule Making proceeding with detailed comments and engineering data to support the numerous benefits to the public that will result from an updated and enhanced DTS regulatory environment, provided that

⁹ Again, "Figure 3" is taken from the JPRM. The Petition contained two "Figure 3[s]." The one below is the second one, from page 9.

other existing licensees are not infringed and can continue to deploy new types of services that take full advantage of DTS rules.

Respectfully submitted,

A handwritten signature in dark ink, reading "Brooks E. Harlow". The signature is fluid and cursive, with the first name "Brooks" being more prominent.

By: _____

Brooks E. Harlow
Counsel for ARK Multicasting, Inc.

Lukas, LaFuria, Gutierrez & Sachs, LLP
8300 Greensboro Drive, Suite 1200
Tysons, VA 22102
703-584-8680

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